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ABSTRACT

A study investigated and compared the vocabulary learning strategies (VLSs) of five non-native English-speaking and six native English-speaking (NES) graduate students of theology in a core course. The students of English as a Second Language (ESL) were all native speakers of Cantonese or Mandarin Chinese. Specifically, the research explored (1) what VLSs the ESL and NES students use to learn the specialized vocabulary of their discipline, (2) how these VLSs may be classified in relation to previous studies, and (3) whether a particular approach (structured vs. unstructured) or strategy (consulting a dictionary) predicts success in lexical acquisition. Data were gathered using a test of theological language that elicited information about both breadth and depth of vocabulary knowledge at the beginning and end of the term, mid-term interviews with each student concerning VLSs and overall study strategies, and a term-end questionnaire on specific vocabulary learning opportunities and strategies. All are appended. Results confirmed the expectation that most students do not use a structured VLS, and that structure in the VLS does not appear to predict success in developing vocabulary knowledge. Individual variations in VLS are discussed, and implications for specialized vocabulary teaching are examined. Contains 28 references. (MSE)

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Vocabulary Learning Strategies for Specialized Vocabulary Acquisition: A Case Study

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Paper presented at the 3rd Pacific Second Language Research Forum (PacSLRF '98), March 26, 1998, Aoyama Gakuin University, Tokyo, Japan.

This paper describes the vocabulary learning strategies (VLS) of ESL and native English-speaker (NES) students during their academic socialization into an English-language Master's program in theology. Using quantitative and qualitative data collected through interviews, a questionnaire, and a Test of Theological Vocabulary (TTV), it addresses the following questions: 1) What VLS do ESL and NES graduate students use in learning the specialized vocabulary of their academic discipline? 2) How may these VLS be classified in relation to previous studies? and 3) Does a particular approach to or strategy in specialized vocabulary learning predict participants' success on the TTV?

Background

Language learning strategies are an important part of L2/FL learning (Gu, 1996; Lessard-Clouston, 1997; Oxford, 1990, 1996), and vocabulary learning strategies (VLS), more specifically, are key to L2/FL vocabulary learning, so teaching them is encouraged in the literature (i.e., Coady, 1997; Hunt & Beglar, 1998; Nation, 1994, Sökmen, 1997). Yet to date relatively few studies have been carried out on VLS, and perhaps none on natural academic vocabulary learning beyond the L2/FL classroom.

Nation & Hwang (1995) distinguish *general*, *academic*, *technical*, and *low frequency* vocabulary, noting that "technical vocabulary occurs with very high or moderate frequency within a very limited range of texts" (p. 36). Zimmerman & Scarcella (1996) make similar distinctions, and refer to "technical words that are used in specific academic fields". Learning this specialized or technical academic vocabulary is the focus of this paper. Casanave's (1992) study revealed that "acquiring the culture of a disciplinary community involves learning that community's specialized language", and research by Parry (1991, 1993, 1997) highlights the challenges of such academic vocabulary learning. Corson (1997) has reviewed the issue and difficulty of learning general academic English vocabulary, and in writing on VLSs which encourage long-term recall, Lawson & Hogben (1996) discuss the importance of VLSs in a way that is relevant to learning the specialized vocabulary of one's chosen academic field:

> In the early stages of language learning, when the tasks being undertaken by the student are more novel, this processing activity is more deliberate than automatic (Hasher & Zacks, 1979). The deliberate procedures, or strategies, developed during this period are probably retained; these strategies should be apparent in the behaviour of students as they undertake a vocabulary learning task. (Lawson & Hogben, 1996, p. 104)

Strategies which learners use in approaching the learning of the specialized vocabulary in their chosen discipline may influence both their learning of it and their academic socialization.

Recent VLS studies which are relevant to the one here include: 1) Sanaoui (1992, 1995) studied ESL & FSL students and found two distinct approaches to vocabulary learning: *structured* and *unstructured* ones that differed in 5 key respects:

a) learners' opportunities for vocabulary learning
(i.e. independent study vs. reliance on course)
b) their range of self-initiated vocabulary learning
(i.e. extensive vs. restricted)
c) their records of lexical items they were learning
(i.e. extensive/systematic vs. minimal/ad hoc)
d) how much learners reviewed such words/records
(i.e. extensive vs. little or none)
e) whether they practised such lexical items (created opportunities in/out of class vs. relied on class)

Sanaoui also found that while the level of proficiency or type of instruction did not affect learners' vocabulary learning, the individual approach used in vocabulary learning (structured vs. unstructured) did contribute significantly to lexical learning.

2) Lessard-Clouston (1996a) followed up on Sanaoui's work in a case study of 14 ESL students who were preparing for the TOEFL and for academic study in English. He found that while most of his students reported spending some 2-3 hours per week on learning English vocabulary, only 3 did so in a structured way, half (7) used a 'semi-structured' approach, and the remaining 4 used an unstructured approach. Unlike Sanaoui's findings, his results indicated that one's membership in each of these groups did not predict his or her language proficiency, nor his or her performance on an individualized vocabulary knowledge test.

3) Gu & Johnson (1996) used a vocabulary learning questionnaire to study the VLS of some 850 third year non-English major Chinese students in Beijing. Through a multiple regression analysis they found that two VLS, self-initiation and selective attention, emerged as positive predictors of their participants' proficiency, as measured by their college English test scores. They also found the VLS of contextual guessing, skillful dictionary use, paying attention to word formation, contextual encoding, and using newly learned words correlated positively with participants' tests scores. Through a cluster analysis they further identified 5 approaches to vocabulary learning (labelled encoders, readers, active strategy users, non-encoders, and passive strategy users), and discovered that VLS combinations, rather than individual VLS, may have made positive differences in their participants' vocabulary learning.

4) Schmitt (1997, p. 206) used Oxford's (1990) work to prepare a taxonomy of VLS, distinguishing two broad types: *discovery* strategies (for initially learning a word's meaning) and *consolidation* strategies (for remembering and using a word once it has been encountered), though some VLS may be used for both. Schmitt then further categorized the VLS in his taxonomy as *determination* (discovering a new word's meaning without obtaining another person's expertise), *social*, *memory*, *cognitive*, and *metacognitive* strategies. In a survey, Schmitt asked 600 Japanese EFL learners to rate their use of various VLS, their perceptions of the helpfulness of those VLS, and to note the most helpful ones. Among the VLS rated most used and

most helpful, six were found to be common: using a bilingual dictionary, written repetition, verbal repetition, saying a new word aloud, studying a word's spelling, and taking notes in class. Evaluating the reported use of strategies by middle school, high school, university and adult EFL learners, Schmitt noted that "the pattern of use for some strategies does change over time" (p. 224), though caution is required in determining such implications with different learners in each sample group.

The Case Study Context, Participants, RQs, and Procedures

The *context* for this study was a large, Christian graduate school of theology (GST) in a major city in central Canada. The specific setting for this study was the core theology course in the GST, Systematic Theology I, a required class for degree students and recommended for all other students. As a result, most GST students take this course during the first term of their academic program, when one might expect that they would be using the specific behaviours and strategies Lawson & Hogben (1996) suggest should be apparent.

As ESL learners represent some 40% of the student body at the GST, the *participants* in this study were five ESL and six native English speaker (NES) students who volunteered to participate. The ESL participants were all Chinese, with either Cantonese (4, from Hong Kong) or Mandarin (1, from Singapore) as their L1. Four had immigrated to Canada, in periods from seven months to ten years before the study, and one was a foreign student who had arrived from the United States the week before classes began. All of the NESs were born and educated in Canada, but came from a variety of backgrounds, including one ethnic Chinese. Except for two, Eve and Don, all of the participants were full-time students at the GST when the study took place.

The present study aimed to provide answers to the following *research questions*: 1) What VLS do ESL and NES graduate theological students use in learning the specialized vocabulary of their academic discipline? 2) How may these VLS be classified in relation to previous studies? 3) Does a particular approach (i.e. structured vs. unstructured) to or strategy (i.e. consulting a dictionary) in specialized vocabulary learning predict success in lexical acquisition, as reflected in participants' results on a test of theological vocabulary?

The *procedures* used to collect data in order to answer the above questions were as follows. During the first two weeks of the course in September, the researcher met individually with each participant in the library, lounge, or a classroom at the GST, where he or she spent on average 20 minutes writing a *Test of Theological Language* (TTL), focusing on vocabulary, developed for this project. Although full details are available in Lessard-Clouston (1996b), the TTL was divided into two sections and aimed to obtain an indication of participants' *breadth* knowledge of specialized theological vocabulary through word

identification (WI) in part one, as well as something of their *depth* of knowledge of some of this lexis through vocabulary knowledge scale (VKS) ratings and sample usage for ten items in part two. The first (WI) part of the TTL was modelled after the Yes/No test outlined in Meara & Buxton (1987; see also Meara, Lightbown & Halter, 1994; and Meara, 1996), while the second (VKS) section was modelled after the VKS introduced by Wesche & Paribakht (1996). A copy of the TTL may be found in Appendix B. Participants wrote the TTL again during the last two weeks of their course in December, to provide comparable data from the beginning (TTL-1, Sept.) and end (TTL-2, Dec.) of their first term being socialized into their chosen discourse community. As noted in Lessard-Clouston (1996b), the researcher scored the TTL and a second rater scored a randomly selected 25% of the tests. On the WI section there were no discrepancies, and for the VKS section an inter-rater reliability rating of 92% was achieved.

Mid-way through the term, at the end of October, the researcher audio taped *interviews* with each participant, following the interview schedule reprinted in Appendix A. The purpose of the interviews was to gather information about a participant's general adjustment to and ways of approaching the learning of the specialized language of their new theological discourse community. At a later date participants' answers to the interview questions were transcribed and the transcripts were analyzed for details on each person's specific VLS and overall study strategies during their first term at the GST.

During the last two weeks of the course, in December, each participant completed an *Approach to Vocabulary Learning Questionnaire* (AVQ), modelled after ones used in previous studies by Sanaoui (1992) and Lessard-Clouston (1994, 1996). The AVQ asked participants about five areas Sanaoui (1992, 1995) highlighted in her research, namely their opportunities for vocabulary learning (including time spent on the course and the main focus of such study), the type and range of self-initiated vocabulary learning strategies they employed, whether (and how) they kept records of lexical items they were learning, how and when they might have reviewed such words and/or records, and whether (and how) they practised using such specialized lexical items. The AVQ also asked participants to list up to ten specialized words, phrases, or expressions they had learned in the course, and where they learned them. A copy of the AVQ is reprinted here for reference in Appendix C.

In analyzing the data, an overview of the VLS of the entire group of participants was first compiled, and is summarized below. Then a portrait of each participant's approach to and specific strategies in learning the specialized vocabulary of the theological discourse community was compiled, as in Table 1 on pp. 7-10. The participants' self-reported VLS data on the AVQ was used to distinguish structured and unstructured approaches using Sanaoui's (1995) five features, and a minimum of *three* distinct strategies was used to determine sufficient VLS range.

The Case Study Results

RQ 1: What VLS do ESL and NES graduate theological students use in learning the specialized vocabulary of their discipline?

1) An Overview of the Group's VLS

Analysis of the interview and AVQ data reveals that participants in Systematic Theology I spent on average 2-3 hours on the course outside of class. Overall, ESL students reported spending more time on the course than their NES peers. On the AVQ all but two students (Eve and Joe) answered question 2 by saying they thought most of the language they were learning was theology-specific terminology, but in their interviews even Eve and Joe said they were learning theological vocabulary. Eve noted:

> *For example, systematic theology, simple word like "revelation", to me, I have my common understanding of it. But, you know, ah, the definition from theology is quite different, the disclosure of God as all things, which I haven't thought before, thought of before. And I also have to understand that this word actually has different meaning in its roots, so that's something I have to know, to understand.* (Eve, Mid-term interview)

Joe referred during his interview to the readings, saying,

> *I'm not an intellectual. Ah, I find sometimes I'm looking up every other word to find what it, what it means.* (Joe, Mid-term interview)

As for *where* participants were learning such theological vocabulary, in response to question 3, all participants said it was in course work, including the readings, class lectures, etc.

Interestingly, in terms of VLS in question 4 of the AVQ, no ESL student wrote in "other" strategies, though half (or 3) of the NESs did, with each of these noting two such strategies. All participants but Earl (ESL) noted that they make mental notes of words, phrases, expressions, etc., and the next most common strategy was practising new words and phrases in papers they were writing (noted by an equal number, 3, of ESL and NES participants), followed by consulting a theological dictionary, which was listed by three ESL and one NES participants. For question 5, all participants noted that they take notes during class lectures, in English. In question 6, on keeping records of the specialized vocabulary they are learning, four students (2 ESL, 2 NESs) said they simply prefer to make mental notes of such words, five (2 ESL, 3 NESs) said they keep occasional written records of new vocabulary, and only two (1 ESL, 1 NES) said they keep detailed written records of new words. The two who did so kept records in computer files, and the others who wrote words down did so in their text or notebooks (question 7).

As for *reviewing* the words they were learning, all but one ESL participant said they review new words, while half (3) of the NESs did, and two said they did not. The other two (ESL/NES) did not respond to that question (#9). In terms of their frequency of review, all four NESs who answered said they did so 'rarely', while four ESL students said they 'sometimes' reviewed words and one answered 'often'. For question 10, on *how* they reviewed such words, five participants (2 ESL, 3 NES) did not respond, and among those who did strategies ranged from "when I come across them again", "every time I open my textbook or notebook", "when I use it (precisely)", "for exams" (in reviewing notes), to "quizzing" oneself or having someone else ask about such words (two NES participants). For question 11, all NESs said they do not make special efforts to practise the new vocabulary they are learning, and only one ESL student responded: "I usually check the meaning of it carefully before using them in papers" (Eve).

In question 13 on the AVQ participants provided varied lists. Six participants (4 ESL, 2 NES) wrote down 10 words, one ESL participant listed 9, one NES wrote 8, and another 6, and one did not list any. Ken, a NES, wrote two words and added a note:

> *Without consulting notes this is the best I can do. I usually need something to jog my memory. I only remember these two because they were in the written test that I saw earlier today. There are most certainly more words but I'd need to consult my notes.* (Ken, AVQ question 13)

In all, some 65 different words or phrases were listed, although ten items were noted by more than one person: subordinationism (2 participants), prolegomena (4), theodicy (2), hamartiology (4), trinitarian (3), hermeneutics (5), imago dei (2), modalism (4), ontological (3), and Arianism (2). As for where the participants felt they learned this vocabulary, clearly from "both" class lectures and readings was noted the largest number of times (60), followed by "class" (16), and "readings" (7).

2) Individual Participants/Specific VLS

Table 1 on pages 7-10 presents a portrait of each participant and his or her strategies for specialized vocabulary acquisition within the Systematic Theology I course at the GST. It gives a summary of the relevant information from their AVQ and mid-term interview data (which is *italicized*) related to the five features on Sanaoui's continuum of structured vs. unstructured approaches to vocabulary study: opportunities for learning, range of self-initiated VLSs, whether the participant kept written records of lexical items being learned, whether they reviewed such words, and if and how they practised such items. As Gu & Johnson (1996) suggest that strategy clusters may be important, other study strategies that participants mentioned in interviews are also listed in the far right column. As will be clear, only four participants used a structured approach here.

Table 1: Portraits of Participants' Approaches to Vocabulary Learning

Name	Time/ Opport.	Examples and Range of VLS	Written Records?	Reviews New Words?	Practice of Words	Other Study Strategies
Earl (ESL) (Struct.)	4-5 hrs course	-consults theol. dictionary -system for compiling words -practises new words in papers	-keeps detailed records (in computer file)	Yes, sometimes (when he comes across words again)	-in writing term papers	*-borrows lecture notes from other students and copies them*
Eli (ESL) (Struct.)	9+ hrs course	-makes mental notes of words -consults theol. dictionary -practises new words in papers *-uses an E-E dictionary*	-keeps occasional written records	Yes, often (when he uses them precisely)	-in writing term papers -outside of course (Q. #12)	*-tried to find a study group; exchanged ideas with one student a few times* *-sometimes tapes course lectures*
Sue (NES) (Struct.)	2-3 hrs course	-makes mental notes of words -practises new words in papers -practises new words in conversations -consults text -collects definitions on cards for exams -quizzes self on words on index c.	-keeps occasional written records *-makes index cards for exam study* *-at exam time summarizes notes*	-Yes, rarely -writes term on one side of index card and definition on other and quizzes self (or has her husband ask her)	-in writing term papers -in conversations ("this is unintentional")	*-talked with prof. about course essay* *-takes very detailed notes* *-reviews notes for tests* *-audits the Contemporary Theology course with same prof. as Systematic Theology*

Don (NES) (Struct.)	6-8 hrs course	-makes mental notes of words -consults theol. dictionary -practises new words in papers -makes study notes for exam or reads relevant parts before writing papers *-keeps a list of all new terms* *-guesses meaning from context in readings* -quizzes self for exams -sometimes asks others to ask him about vocabulary	-keeps occasional written records in class lecture notes -keeps detailed written notes (in a computer file)	Yes, rarely (see notes on practice in next column on the right)	-in writing term papers -quizzes self for exam -sometimes gets other people to ask him about words or material	*-asked another prof. about term paper in another course* *-chose to do an optional paper rather than OT final exam* *-keeps course study notes on computer* *-used a study group to discuss the term paper*
Kim (NES) (Unstr.)	No time course	-makes mental notes of words -tries to get meaning from context -if sees word 3 times, consults Webster's English dictionary -gets general idea/uses context	-keeps no records	No	No response	*-asked brother to edit paper* *-studied for mid-term with another student* *-borrows notes from others* *-for other courses makes notes/summarizes her readings*

Joe (NES) (Unstr.)	2-3 hrs course	-makes mental notes of words -practises new words in papers *-consults theol. dictionary* *-consults his textbooks* *-makes a word list*	-prefers to make mental notes	No response	-in writing term papers	*-reviews notes for tests* *-used participating in the research as a motivating factor* *-is trying to be more organized (struggles with organization)*
Eve (ESL) (Unstr.)	4-5 hrs course	-makes mental notes of words -practises new words in papers *-consults theol. dictionary for unknown words*	-keeps occasional written records (in the margin of her text or notebook)	Yes, sometimes (when opening her text or notebook)	-in writing term papers	*-talks about lecture/readings with Ed(husband)* *-reading is key* *-sometimes listens to tapes of lectures* *-went to seminar on writing term papers*
Ken (NES) (Unstr.)	2-3 hrs course	-makes mental notes of words -sometimes highlights texts and writes explanations in margins	-keeps occasional written records	No, rarely (reviews for exams, by summarizing notes and reviewing summaries)	No response	*-asked 2 friends to read his term paper & included their feedback* *-makes connections from German theol. words to Dutch, which he knows*

Ed (ESL) (Unstr.)	6-8 hrs course	-makes mental notes of words -consults theol. dictionary	-prefers to make mental notes	Yes, sometimes	No response	*-sometimes listens to tapes of lectures -rewrites/types study notes to prepare for exams*
Elly(ESL) (Unstr.)	2-3 hrs course	-makes mental notes of words *-sometimes looks words up in a dictionary*	-prefers to make mental notes	No response	No response	*-uses mainly memorization and repetition for studying -tries to "get the big picture" -reads related text sections for background on term papers*
Jon (NES) (Unstr.)	2-3 hrs course	-makes mental notes of words	-keeps occasional written records	Yes, rarely (rewrites/ types notes for reviews)	No response	*-takes notes while reading to understand it and put it into his own words -reviews class notes at exam time, putting them in his own words -asks others what the course readings are about*

RQ 2: How may these VLS be classified in relation to previous studies?

To begin, a useful distinction in categorizing the VLS here is Schmitt's (1997) discovery vs. consolidating strategies. Perusal through Table 1 reveals that by far the most common *discovery* strategies (for learning a word's meaning initially) were determination strategies: for the participant to consult an English theological dictionary (or Webster's in one case), make a mental note of the vocabulary item, or guess its meaning from context (in a lecture or reading). Interestingly, no participant mentioned "ask NESs the meaning of words", a social discovery strategy, although it was one clear check-off option on the AVQ.

Most of the VLS participants outlined would be classified as *consolidation* strategies (which help one remember and use a word). In Schmitt's taxonomy, the "practise new words in papers" VLS would be classified as a *memory* strategy, as would Elly's memorization of key words and course material. Interestingly, that subcategory is Schmitt's largest, but is perhaps least represented in the data here. Instead, most of the strategies in the present data would be classified as *cognitive* VLS in Schmitt's scheme, because such VLS involve some form of manipulation or transformation of the target items. Examples of such strategies in this study include, on a basic level, the fact that all participants specified that they took notes in class (AVQ question 5), while several mentioned using the glossary in one of their theology texts, keeping a vocabulary list or making a computer word file, making index or flash cards, or using written or verbal repetition of target words.

In terms of *metacognitive* strategies, which involve conscious efforts to control and evaluate learning, both Sue and Don referred to quizzing themselves on theological vocabulary before exams, and sometimes asked other people to quiz them about such lexis. A final observation with regards to Schmitt's taxonomy is that other than the VLS of "asking someone to quiz oneself" on the theological vocabulary (as just noted), no other *social* consolidation VLS were listed by participants here. What is interesting to note in the vocabulary learning approach portraits in Table 1, however, is that a number of the "other study strategies" discussed during the interviews are of a clearly social nature, such as talking to the professor about an assignment, meeting with a study group to discuss the term paper, discussing the lectures or readings with other students, etc. Perhaps a key observation in this regard is that NES participants report using such social study strategies much more frequently than the ESL participants here.

In relating the present VLS findings to Gu & Johnson's (1996) results, it is evident that VLS in the two strategy groups which were positive predictors of proficiency in their research were also used by participants in the present investigation. Under metacognitive regulation they list *self-initiation* strategies,

which are found in the present data through various students' use of VLS and other study strategies relating to preparation for exams, and *selective attention*, which is reflected here in the way participants look specific words up in dictionaries, have a clear sense of when they need to learn or remember a word (as in Kim's dictionary look-up after meeting a new word three times), apparently knowing what cues to use in guessing the meaning of a word from context, and in making mental or written notes of words that appear important to them. In the present data there are also examples of VLS related to contextual guessing, skillful dictionary use, paying attention to word form (i.e., Ken), contextual encoding, and practising newly learned words, all of which also correlated positively with the participants' test scores in the Gu & Johnson (1996) study.

Finally, in classifying and relating the present findings to those of previous studies, it is more difficult to find examples here of all of the mnemonic procedures Sanaoui (1995) deemed important. While examples of VLS such as writing, using the lexical items, contextual associations, and linguistic associations are clear in the data in Table 1, examples of immediate or spaced repetition, imagery, and talking about the lexical item with someone are absent from the present findings.

RQ 3: Does a particular approach (structured vs. unstructured) to or strategy (i.e. consulting a dictionary) in specialized vocabulary learning predict success in lexical acquisition, as reflected in participants' results on a test of theological vocabulary?

In response to RQ 3 it is helpful to examine the data in Table 2, which summarizes each participant's scores (expressed in percentages) on the WI and VKS sections of both TTL-1 & -2. Like Figure 1, which presents this information more visually, this data is reproduced from Lessard-Clouston (1996b) in a slightly different form, reflecting the focus of the present study on VLS and two main approaches to specialized vocabulary acquisition. Considering the data in Table 2, one can see that in each group there appears to be one participant whose WI scores on TTL-1 are lower than the others in the group: Earl among the structured learners and Joe in the unstructured group. If we exclude those lower scores in each group for a moment, we see that the range of the remaining scores on each of the two WI sections of the TTL (-1 & -2) is very similar. Even including Earl and Joe's lower WI results, the structured and unstructured group averages are quite similar, and close to the overall average. A similar, though somewhat more complex, pattern exists for the VKS scores.

The main answer to the above research question, however, is that overall the structured group fared less well on both the WI and VKS sections of both TTL-1 and TTL-2. We can also see that participants in the unstructured group, as a whole, had higher scores on TTL-1, and that their TTL-2 results, overall, are also better than those in the structured group. While there are

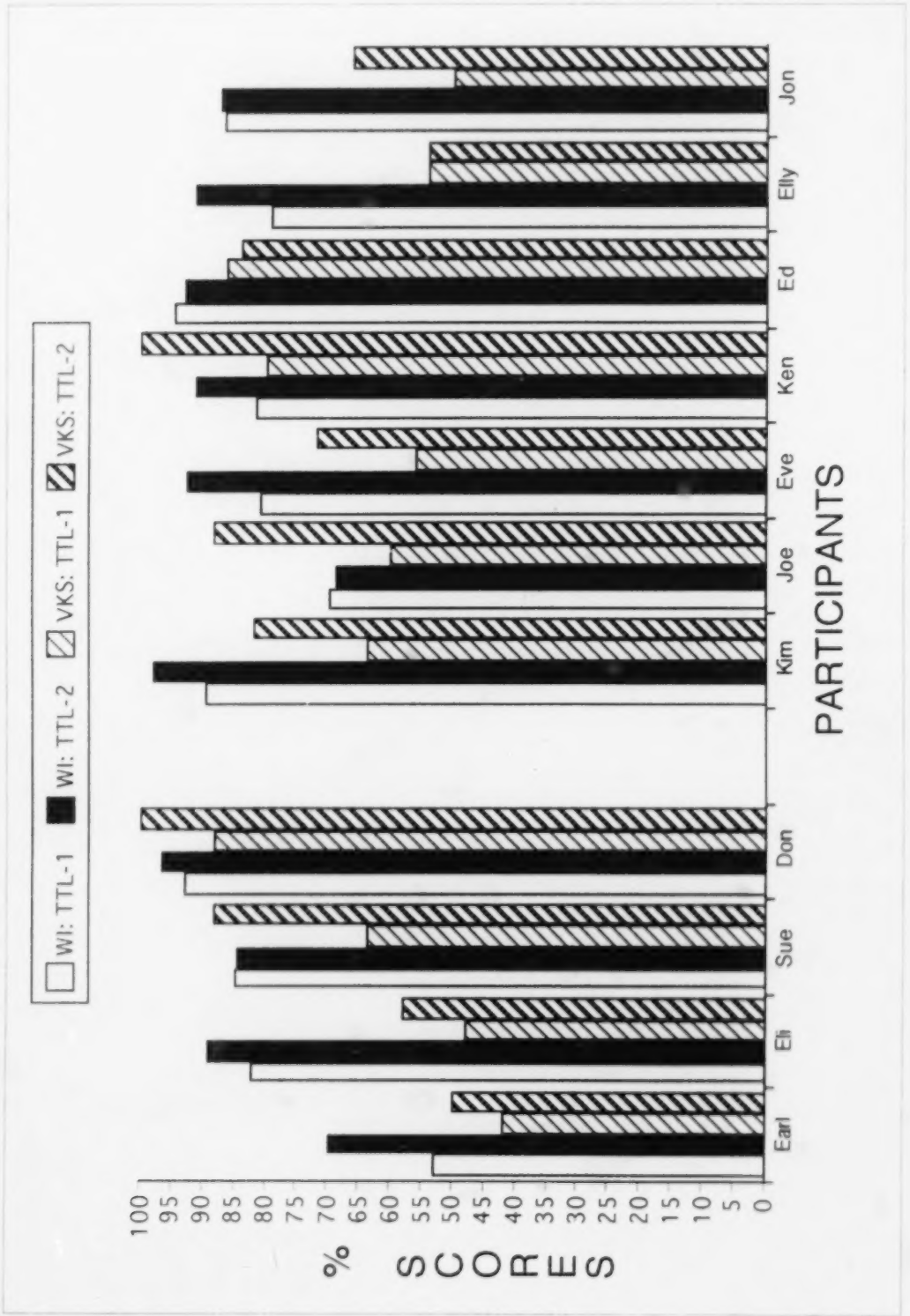
TABLE 2
Participants' TTL Scores (WI & VKS) Expressed in Percentages

	Word Identification		Vocabulary Knowledge Scale	
Participant	TTL - 1	TTL - 2	TTL - 1	TTL - 2
Structured				
Earl	53.09	69.49	42	50
Eli	82.18	89.31	48	58
Sue	84.97	84.75	64	88
Don	93.22	96.44	88	100
Structured Average	**78.37**	**85.00**	**60.50**	**74.00**
Structured Median	**83.58**	**87.03**	**56**	**73**
Unstructured				
Kim	89.58	98.26	64	82
Joe	69.71	68.73	60	88
Eve	80.89	92.69	56	72
Ken	81.71	91.31	80	100
Ed	94.51	93.05	86	84
Elly	79.15	91.31	54	54
Jon	86.49	87.2	50	66
Unstructured Average	**83.15**	**88.94**	**64.29**	**78.00**
Unstructured Median	**81.71**	**91.31**	**60**	**82**
Overall Average	**81.41**	**87.50**	**62.91**	**76.55**
Overall Median	**82.18**	**91.31**	**60**	**82**

obvious individual differences, the average group improvement between the two tests on the VKS is roughly 14% for both the unstructured and structured groups, while the average group improvement on the WI section is similar though slightly better for the structured group (at 6.63%) compared with that of the structured group (at 5.79%). Further examining the final success of each group on the TTL-2, it is clear that the unstructured group did best overall, with 5 out of 7 participants in the 90s range on WI and three VKS scores in the 80s (and one at 100), compared with only 1 structured group member whose WI score was in the 90s and one VKS score in the 80s (and one at 100) on the TTL-2. Although the unstructured group is clearly larger than the structured one, the former's pattern of success is evident.

In reviewing Table 1 it is obvious that no individual VLS is common to all of the members of each group, structured or unstructured. Thus it is not possible to predict success in a group based on particular VLS. Similarly, when considering individual scores and VLS, no pattern appears to indicate success on the TTL. At first glance it seems from Table 1 that most of the students who obtained scores in the 90s in WI on TTL-2 (in Table 2) used some form of social strategy (VLS or study strategy), but upon further analysis it also becomes evident that neither Ed nor Elly reported using any such social

FIGURE 1
Participants' TTL Scores (WI & VKS) Expressed in Percentages



strategies, and both their scores were in the 90s on TTL-2's WI section. So in answer to the second part of RQ 3, it must be concluded that no particular strategy in specialized vocabulary learning can be said to predict success in lexical acquisition in the present study, as it is reflected in participants' results on both the WI and VKS sections of the test of theological vocabulary (TTL).

Discussion

Before considering the findings of this study it is important to note some of the limitations of this research. First, the present study represents only one case -- participants in one Systematic Theology course in one theological discourse community. Second, the number of participants (11) is small, and they represent only about 11% of the students in the Systematic Theology I class, which makes for very limited generalizability of the results. Third, although detailed background data was collected on the participants I have not yet specifically related it to the findings here. For this reason this is still a work in progress, and further analysis needs to be carried out. However, these limitations do not take away from the main purpose of the study, which was to describe and analyze ESL and NES participants' natural VLS in learning the specialized vocabulary within their chosen academic discourse community.

The results of the present research corroborate the conclusions of the Lessard-Clouston (1996a) study, namely that overall most students do not appear to approach their vocabulary learning in a structured fashion, as defined using Sanaoui's features of lexical acquisition, and that 'structure' in one's approach to vocabulary learning does not appear to be a determining factor in one's success on a test of vocabulary knowledge. These main findings here further draw into question the usefulness of categorizing learners into groups on a continuum of structured vs. unstructured approaches to vocabulary acquisition.

What is perhaps more important to consider in the present study are the similarities of the two main groups. Both the structured and unstructured groups had a range of TTL scores, and both included one individual whose initial scores seemed obviously lower than the others in the group. Both groups also had one individual whose TTL-1 scores were very high (Don and Ed). What distinguished the individuals in the two groups was the amount of structure within their approach to vocabulary learning, but overall most of the same strategies were common to both groups, though of course the structured group spent more time on and had more opportunities for vocabulary learning, used a wider range of self-initiated activities, kept more detailed records of lexical items they were learning, and reviewed and practised those vocabulary items more extensively.

The distinctions made between structured and unstructured approaches by Sanaoui and here appear to be based on a very fine

line. Consider the example of Eve. She was classified as an unstructured learner because on her AVQ she noted only two VLS, and the minimal cut-off was three. However, a glance at her VLS and portrait in Table 1 reveals that in the interview she did indeed mention a third strategy, consulting a dictionary to discover the meaning of unknown words. Because the structured vs. unstructured groupings here were based primarily on the participants' self-reported VLS on the AVQ, Eve was not included in the structured group. But her overall approach as outlined in Table 1 appears to be as structured as those of Earl or Eli, the two ESL participants in the structured group. The implication here seems to be that single sources for collecting information about or basing decisions on participants are insufficient, and that multiple data sources are required for a more complete and accurate picture of individual participants and groups.

Given that the purposes of the vocabulary learning (i.e. more general French language classroom learning in Sanaoui's case and specialized academic vocabulary acquisition here) were unique, it may be understandable that the results of this study are different. Also, in Sanaoui's study the participants were in more of a foreign-language like setting, whereas here they were in an input rich environment, with lectures and readings and other courses providing further opportunities to learn the specialized theological vocabulary of their academic discourse community. This distinction may well account for the fact that most of the strategies students reported using here were *consolidation* VLS in Schmitt's scheme, especially cognitive ones. It must also be noted that while Sanaoui's participants were motivated undergraduate students, those here were obviously already somewhat successful academically, as they were all beginning their graduate studies in theology at their chosen GST. As such the participants in the present investigation could very well have been using VLS and other study strategies that appear to have worked for them in their previous educational experiences. This may account for very personal, and perhaps successful, approaches to specialized vocabulary learning during the beginning of their academic socialization into the GST.

One final point to make here is that while the Sanaoui (1995) and Gu & Johnson (1996) studies included measures of participants' L2 proficiency, no such data was collected here, as all of the ESL participants had completed their undergraduate studies in English (in Hong Kong, Canada, or the U.S.), and were therefore not required to sit a standard test, such as the TOEFL. As noted above, this previous, and successful, academic experience in English may also have influenced participants' use of various VLS here, as well as their general success on the test of theological vocabulary (TTL).

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APPENDIX A
Mid-Term Interview Schedule

1. So overall, how are you finding your experience here (at GST) thus far?
2. How does the Systematic Theology I course compare with the others you are taking?
3. Are there any aspects of the course you find particularly easy or difficult? (i.e., readings, lectures, papers, etc.)
4. You know that my study is on the specialized language learning that students go through here. Do you find that you are really learning any new language? If so, what? Can you give some examples? Where/how have you learned it?
5. Do you find yourself doing anything particular in order to help you carry out your studies here?
6. Do you have any comments or suggestions for me (on my research) or for future students (on adapting to GST)?

APPENDIX B

(Reproduced from Lessard-Clouston, 1996b, pp. 23-27)

Test of Theological Language

Name: _____

A. Word Identification

Please read the following list of words and phrases. Circle (i.e. circle) those which are ***theological*** *words or phrases. You do not need to spend a lot of time on each item. In fact, it is preferable that you give your first impression. Example: 1. (sin)*

1. theodicy
2. carcinogenic
3. colostomy
4. trigeminal
5. conversion
6. optimal
7. homiletic
8. phatic communion
9. prostatism
10. modalism
11. omniscience
12. foreknowledge
13. polysemous
14. inspiration
15. fricative
16. dogmatics
17. evaporative
18. resurrection
19. adsorption
20. atheism
21. inerrancy
22. deism
23. somatic
24. hyperthyroidism
25. creed
26. precipitator
27. pneumatology
28. sanctification
29. oncology
30. mutagenic
31. apologetics
32. consumption
33. deity
34. redemption
35. cosmological
36. epistemology
37. expiation
38. harmatology
39. interpretation
40. illocutionary act
41. aspiration
42. providence
43. sacrament
44. dispensationalism
45. mycosis
46. creation
47. salience
48. trinity
49. fideism
50. canon
51. evil
52. luminescent
53. predestination
54. trichotomy

55. epenthesis
56. ecumenical
57. absinthism
58. authority
59. quadratic equation
60. eschatology
61. gnosticism
62. vertical equity
63. justification
64. enlightenment
65. confession
66. distractor
67. circle of willis
68. Calvinism
69. immutability
70. metathesis
71. vocative
72. carbonaceous
73. christological
74. duopsony
75. pushfulness
76. impactor
77. teleological
78. transcendence
79. ministry
80. election
81. liturgical
82. monetarism
83. revelation
84. residual
85. toluene
86. salvation
87. double counting
88. polytheism
89. illumination
90. atonement
91. free will
92. ecclesiology
93. lithotomy
94. foreordination
95. decree
96. simulation
97. meteorology
98. sovereign
99. omnipotence
100. fundamentalism

B. Vocabulary Knowledge Scale

Please show how well you know each of the words or phrases below. Check off (✓) the appropriate line and follow the instructions for each option. If at all possible, please make a sentence for each word, especially if you choose either (c) or (d).

1. Arminianism

___ (a) I don't remember having seen this word before.
___ (b) I have seen this word before but I don't know what it means.
___ (c) I have seen this word before, and I *think* it means _____
_____.(Please give a paraphrase, synonym, or translation)
___ (d) I know this word. It means _____.
(Please give a paraphrase, synonym, or translation)

I can use this word in a sentence. (Please make a sentence): _____
_____.

The other nine items tested in the VKS section of the test (in order) were: creationist, doctrine, filioque, hermeneutic, Image of God, incarnation, monotheism, ontological, and soteriology.

APPENDIX C

Approach to Vocabulary Learning Questionnaire

The purpose of this questionnaire is to provide information on your language learning in the OTS Systematic Theology I course. The information you provide here is confidential for the purposes of my study. Thank you for taking the time to do so.

Name: _____

1. Approximately how much time per week do you spend outside of class, on average, on the Systematic Theology I course? (Including reading, reviewing notes, etc.)
   ___ No time ___ One hour or less ___ 2-3 hours
   ___ 4-5 hours ___ 6-8 hours ___ 9 or more hours

2. Would you say that most of the language you are learning is mainly:
   ___ General academic English (for reading, writing, etc.)
   or ___ Theology-specific terminology (words, phrases, & expressions)

3. Does the theological language that you are learning come mainly
   ___ from the readings, class lectures, etc. in Systematic Theology I and other OTS course work
   or ___ from your involvements outside of OTS (at church, in self-study, etc.)

4. In your learning of the specialized language of theology in English, do you regularly: (Please check all that apply)
   ___ make mental notes of words, phrases, expressions, etc.
   ___ ask native English speakers the meaning of words
   ___ consult a theological dictionary about specific terms
   if so, which dictionary: _____
   ___ keep a vocabulary notebook or have a system for compiling new words
   ___ practise new words and phrases in papers you are writing
   ___ practise new words by using them in conversation, sermons, etc.
   ___ practise new words by using them when writing in your diary/journal
   ___ other (Please specify) _____
   ___ other (Please sepcify) _____

5. Do you take regular, written notes during the class lectures?
   ___ No ___ Yes If yes, in what language:
   ( ) English ( ) Chinese ( ) Korean ( ) Other

6. Which statement below best describes what you do: (Choose one)
   ___ I prefer to make mental notes of the specialized language I am learning.
   ___ I keep occasional written records, by making notes on my readings, in the text, in my class lecture notes, etc.
   ___ I keep detailed written records of the words, phrases, and language I am learning, i.e. in a vocabulary list, book, on cards, in a notebook, etc.

7. If you keep written records, which statement best describes you? (Choose one)
   ___ My main reason for writing down English words, phrases, and expressions is to help me memorize them.
   ___ My main reason for writing down English words, phrases, and expressions is so that I can come back and review them later.

8. If and when you write down English words you are learning in class or in your own study time, where do you write them?

9. Do you review the words, phrases or expressions you write down?
   ___ No ___ Yes
   If yes, how often do you review these words, phrases or expressions:
   ___ rarely ___ sometimes ___ often ___ very often

10. How do you usually review the English words you write down?

11. Do you make a special effort to practise the special vocabulary you are learning in your writing (course papers, etc.) or speaking?
   ___ No ___ Yes If yes, please summarize how you practise it:

12. Which statement best describes what you do? Check one:
   ___ My opportunities for practising the special vocabulary I am learning in Systematics come mostly from class activities, homework, readings, etc.
   ___ My opportunities for practising the special vocabulary I am learning in Systematics come mostly from self-initiated activities outside the course.

13. Without consulting any notes or books, please list up to ten specialized words, phrases or expressions that you have learned in this course (i.e. you didn't know them before). Where did you mainly learn them? In class lectures, from course readings, or both? (please check below)

1.	_____	___ Class	___ Readings	___ Both
2.	_____	___ Class	___ Readings	___ Both
3.	_____	___ Class	___ Readings	___ Both
4.	_____	___ Class	___ Readings	___ Both
5.	_____	___ Class	___ Readings	___ Both
6.	_____	___ Class	___ Readings	___ Both
7.	_____	___ Class	___ Readings	___ Both
8.	_____	___ Class	___ Readings	___ Both
9.	_____	___ Class	___ Readings	___ Both
10.	_____	___ Class	___ Readings	___ Both